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ABSTRACT

This policy brief presents findings from Southwest Educational Development Laboratory research on resource allocation in 1,504 independent school districts in Arkansas, Louisiana, New Mexico, and Texas. Using 5 years' data from the federal Common Core of Data and the Census Bureau along with 3 years of student performance data from each state department of education, the study analyzed operating expenditures by function; teacher and administrator staffing; various district and student characteristics; and student achievement test scores. Using a variety of analysis tools and a wide array of collected data, the study answered the following research questions: (1) What are the expenditure patterns over time in school districts across varying levels of student performance? (2) How do improvement districts (districts with consistent increases in student performance over time) allocate their financial and human resources? (3) What allocation practices have improvement districts implemented that they identify as effective? and (4) What barriers and challenges have improvement districts faced in allocation practices? The policy brief includes study results for each state, definitions, recommendations for policymakers, and a short list of resources. (WFA)

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ED 482 363

Investing in Instruction for Higher Student Achievement.

Judy Bray

September 2003

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Insights
ON EDUCATION POLICY, PRACTICE, AND RESEARCH

SEPTEMBER 2003
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SOUTHWEST EDUCATIONAL DEVELOPMENT LABORATORY

Investing in Instruction for Higher Student Achievement

In This Issue

This is SEDL's second policy brief about education resource allocation. The first issue introduced current research, practice, issues, and concerns on the topic. This issue presents findings from SEDL's recently completed research on resource allocation in the southwestern region. Policymakers and practitioners will find the results informative in their efforts to support higher student performance.

In 2001, our policy team at SEDL joined forces with the Charles A. Dana Center at The University of Texas at Austin. With the help of state officials in Arkansas, Louisiana, New Mexico, and Texas, we conducted a two-year finance study on spending patterns and performance throughout the Southwest.

Our results offer a powerful message to state and local policymakers: *In more than 1,500 Southwest school districts, student achievement is linked to spending patterns, and money matters when spent on instruction.* This *Insights* issue highlights what we discovered and concludes with important tips about spending for higher student achievement.

Allocating resources is one of the toughest tasks a policymaker faces. To make the most of the education dollars in hand, state and local leaders want to concentrate spending where it will have the greatest impact on student achievement. Recent studies show that it is not that simple:

- Finance and budgeting practices are not well connected to student outcomes.
- Spending policies and practices can contribute to systematic and systemic improvement, but at times these policies are seen as a barrier or challenge.
- Critical questions about how spending practices can support broader education system reforms loom ahead in most states, especially as budgets tighten.

For the first time, research is beginning to shed light on these critical gaps, and our study helps illuminate resource allocation issues in the Southwest.

EA032878

Examination of Resource Allocation in Education: Connecting Spending to Student Performance

About This Study

We studied fiscal and staffing allocation patterns in 1,504 independent districts in four states (Arkansas, Louisiana, New Mexico, and Texas). Ranking districts based on state achievement test scores gave us three levels of performance for each state. The top third of districts were called *high performing* and the bottom third termed *low performing*.

Five years of fiscal, staffing, and demographic data from the federal Common Core of Data (CCD) and the Census Bureau went into our study, along with three years of student performance data from each state department of education. For our analysis of spending and staffing patterns, we reviewed data on

- operating expenditures by function.
- teacher and administrator staffing.
- various district and student characteristics (district size, enrollment by race/ethnicity, percent of special education, and economically disadvantaged students).
- student achievement test scores.

We also studied spending in districts with consistent increases in student performance over time and called them *improvement districts*. We took a look at 12 *improvement districts* serving mostly minority and/or economically disadvantaged students to determine the practices and strategies they use to make spending and staffing decisions. We chose three districts in each state for this more in-depth look: one with an enrollment of 800–1,999 students, a second with 2,000–10,000 students, and a third with more than 10,000 students.

Using a variety of analysis tools and the wide array of data collected, we answered four research questions:

1. What are the expenditure patterns over time in school districts across varying levels of student performance?

2. How do *improvement districts* allocate their financial and human resources?

3. What allocation practices have *improvement districts* implemented that they identify as effective?

4. What barriers and challenges have *improvement districts* faced in allocation practices?

For a copy of the full research report, go to www.sedl.org/rel/pr-examination.html.

Southwestern spending practices mirror national trends

Total education dollars spent is an important basis from which to start any resource allocation study. This, along with an understanding of basic education context, helps to guide education policy decisions appropriate to a locale. SEDL was particularly interested in demographic and expenditure variations across the four states studied. The map on the next page shows some basic context for these states. In 2000, average spending in the four study states ranged from a high of $6,288 per student in Texas to a low of $5,277 in Arkansas. Education spending in the four states was lower than the national average. With the exception of Texas, local districts in the Southwest paid a smaller share of their total dollars than their counterparts in other regions; state and federal funds accounted for more than half of their total revenues. Federal funds are particularly important in SEDL's region, with every state receiving more than the national average.

We were not surprised to find that the study districts allocate resources along the lines of national averages. About 80% covers student services in schools: instruction, school leadership, counseling services, supplies, and materials. The other 20% is spent on transportation, food services, tax collection, and other business expenses. *Instruction* alone—that is, teachers, books, and instructional programming—consumes around 60% of available dollars.

The pie chart of total expenditures helps put the all-important category of instruction into perspective. On average, the national data show spending for operations and maintenance to be just less than 10% of total dollars spent, while general administration weighs in at a mere 2.1% of education expenses.

National Education Expenditures

Expenditure Categories

Function	*Percent*
1 Instruction	61.8
2 Operations/maintenance	9.8
3 School administration	5.7
4 Student support	5.0
5 Instructional staff support	4.2
6 Non-instructional services	4.1
7 Student transportation	4.0
8 Central and business support	3.3
9 General administration	2.1

National Center for Education Statistics (2001)

Performance and spending patterns in southwestern districts

Broad spending patterns in our study resembled the national figures, but we found important differences among school districts when we looked more closely. In all four study states, high-performing districts spent more on *instruction* than low-performing districts as a share of total expenditures. This is a key finding for policymakers. High-performing districts in three states also spent more on instruction per pupil and employed more teachers.

The table on the next page describes characteristics of the high-performing districts in the four states SEDL studied. These findings tell us that where districts put their money is indeed important for student success.

Why does the link between spending and performance matter so much?

1. Education spending has grown for the past 40 years, while student performance has not improved by many measures.
2. There are still genuine inequities across states, districts, and schools, yet all students are expected to meet high performance expectations.
3. Large-scale improvement efforts on the policy agenda in many states—reducing class size, adequately funding programs for the disadvantaged, or improving teacher pay—are costly, and over time the money to pay for them will have to come through reallocation rather than new dollars.

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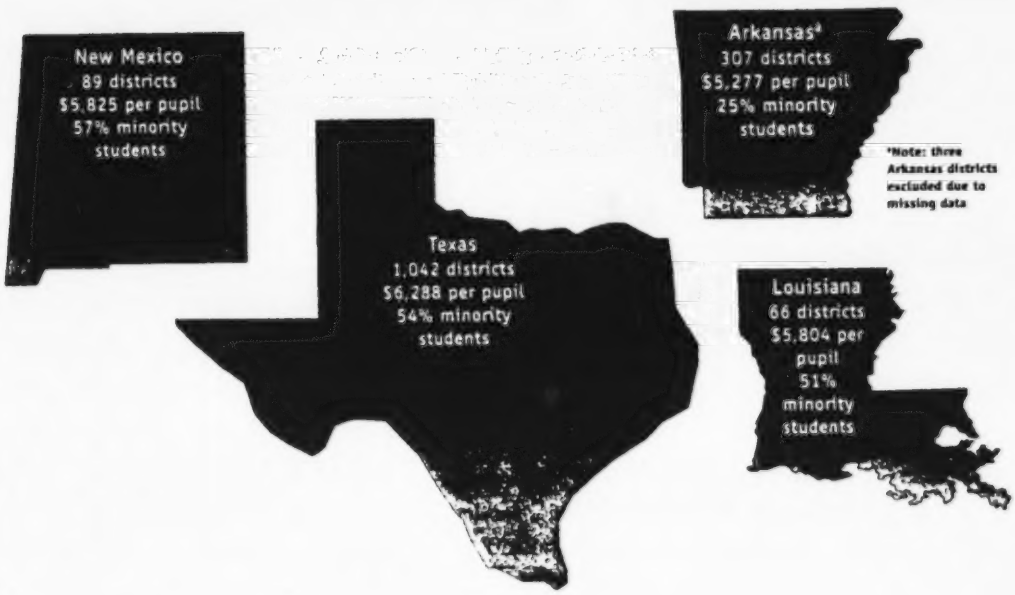
State Context and SEDL Study Results

Demographics from National Center for Education Statistics (2001)



Where districts put their money is indeed important for student success.

Statewide differences in high- and low-performing district spending

	Compared to low-performing districts, the high-performing districts:
All four states	Spent a larger share on instruction
LA, NM, TX	Spent more per pupil on instruction Employed more teachers
AR and LA	Spent less on general administration
AR and TX	Employed fewer administrative staff

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Staff members are viewed as a resource that can be reallocated to meet priorities.

Similar to the findings on investing in *instruction*, we also discovered that high-performing districts spent more in a category called core expenditures (instruction plus student support and instructional staff support) in two of the states, Arkansas and Louisiana.

Spending strategies in *improvement districts*

We wanted to take a closer look at the resource allocation practices in school districts with large minority and/or poverty student populations and where student performance is high or on the upswing. At the same time, we wanted to be sure that these districts were reflective of their states in terms of geographic location and size. We selected 12 of these *improvement districts* and groups of *comparison districts* from the four study states to include in this part of the study. We surveyed teachers and talked with the *improvement* district and school leaders about their spending practices and policies to get a richer picture of local practice in light of the expenditure data in our analysis. They told us what works for them and what barriers they face in making decisions about allocating resources.

Core expenditures (instruction, student support, and instructional staff support) increased from 1994 to 1999 in all the districts. The *improvement districts* were more likely to have increased core spending than their *comparison districts*, a pattern that was especially evident among the small districts.

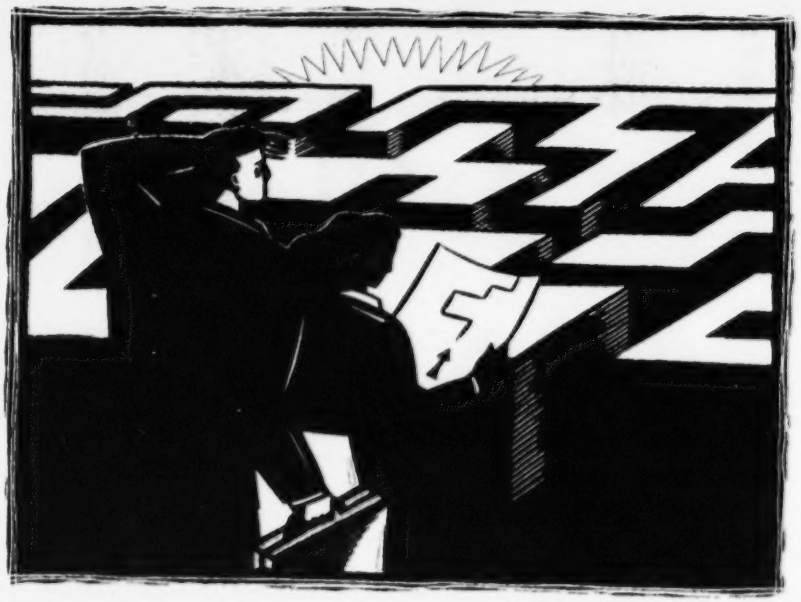
We found other characteristics of the *improvement districts* as well:

- Higher spending on instruction and lower spending on general administration and non-instructional services than their *comparison districts*
- Disaggregated achievement test data used in budget and curriculum decisions
- Data-driven needs assessments regularly conducted
- Research on instructional programs used to make programmatic decisions
- Increased professional development and technology offered to all staff, especially teachers and other instructional staff

What is a "resource"?

Most of us think first of money when the issue of resource allocation arises. The leaders and staff of our study's *improvement districts* employed a broader definition that included the following in their list of resources to be reallocated as needed for improvemenr goals:

- Personnel
- Time
- Materials
- Parents and community



- Pooling of funds, flexibility in spending, and shared budget decisions to better allocate funds
- Needs-based reallocation of staff, including: expanding roles for teachers, redirecting funds to increase instructional staff and decrease central administration, creating new positions, and evaluating and building staff capacity to reassign them to areas of higher need

Staff in the *improvement districts* did not specifically say that insufficient funding was a major obstacle, but many of the challenges they mentioned would be quite costly. Upgrading the low industry-wide salary levels for teachers and finding adequate time for teachers to get away from class for training and individual planning were common examples. We heard about a wide array of other challenges and barriers associated with resource allocation including:

- Staff shortages and difficulty finding quality teachers
- Enrollment changes and other factors that lead to fluctuating revenues
- Within-district inequities
- Inflexibility of categorical funds
- Large class sizes

The *improvement districts* put a range of reforms in place to boost the performance of their students and then actively reallocated resources to support those reform efforts. Creative and responsive to school-level needs, these districts used clear goals to allocate funding, staff, time, parent and community, and physical resources.

We also found a pervasive mindset in the *improvement districts* that staff members are viewed as a resource that can be reallocated to meet priorities. These districts used professional development and time to increase the repertoire of teachers' skills, thus increasing the pool of teacher "resources" that could be applied to priority areas. The professional development dollars came from a variety of sources, including state budgets.

Some district leaders admitted to having grown hesitant about state mandates since requirements often change and each change involves a

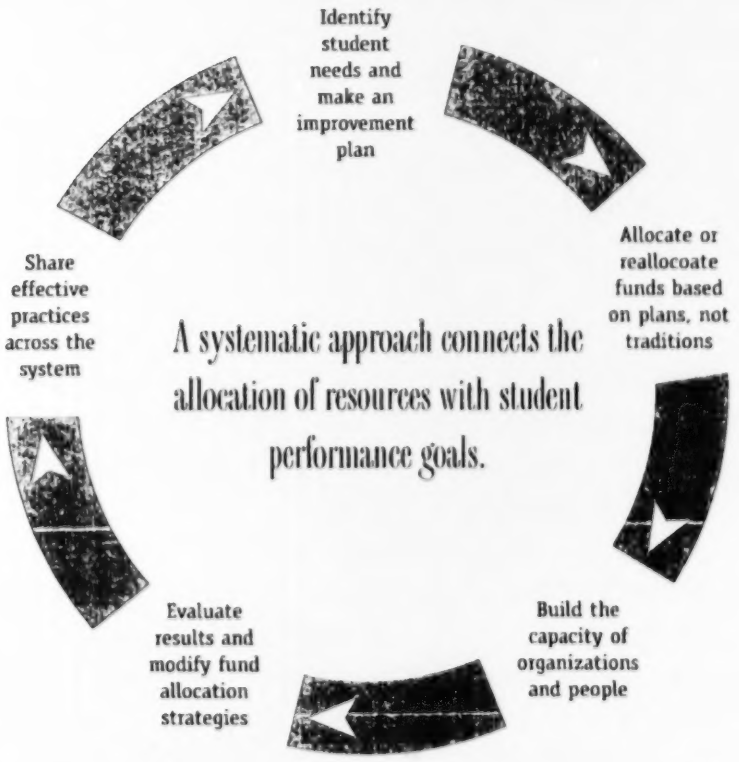
new local investment of resources. Mandates requiring new programs or services (e.g., limiting social promotion, increasing benefits for employees, disaggregating data) often arrive without guidance on implementation and without sufficient funding.

District leaders also acknowledged they lack the capacity to investigate, much less track over time, how their use of resources directly affects student performance. Cost-benefit or cost-effectiveness studies could help with this larger picture; better yet, direct evaluations of how spending patterns and practices impact student performance would provide insight. These strategies were not part of the *improvement districts'* usual practice, mostly because they have neither the data nor the skills to analyze them.

Recommendations

Looking across the various aspects of our study, we rarely saw fiscal and other resource allocation as an integral part of the school and system reform processes. Much is written about the alignment of goals, priorities, and activities, but marshaling the resources of a wide range of decision makers requires a common understanding of how to proceed.

Thus our overall recommendation is that state and local policymakers work toward a more systematic approach, a common frame of reference that provides help to rethink how resources will be allocated. We believe all actors in the education system—from legislators and state education agency staff to district and school leaders, teachers, and parents—have a new role to


Identify student needs and make an improvement plan
Allocate or reallocoate funds based on plans, not traditions
Build the capacity of organizations and people
Evaluate results and modify fund allocation strategies
Share effective practices across the system
A systematic approach connects the allocation of resources with student performance goals.

What is a "systematic approach"?

A ***systematic approach*** starts with an overall framework and includes training and ongoing help so that many more people in the system can

1. use student data for planning,
2. focus spending on identified needs and priorities,
3. develop leadership and decision-making structures that support goals,
4. evaluate improvement efforts credibly, and
5. communicate effectively with peers about what works.

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What is "needs based budgeting"?

Needs-based budgeting is a strategy for resource allocation in which school faculty, staff, and community members identify their highest priorities and have opportunities to make a case for reallocating resources in support of those priorities.

play and much to gain by implementing such an approach.

States and districts can develop a more systematic approach

Most people would agree (at least in theory) with the idea that local decisions about spending could be enhanced by better data collection, analysis, and reporting strategies. In the spirit of finding common ground, we encourage state leaders to think carefully about the school district procedures we recommend and to consider whether statewide changes might be needed. And in turn, we urge district leaders to consider the potential benefits if the state procedures we suggest are carried out.

State level

While our study focused on school districts, some crucial suggestions for state-level policymakers emerged. These ideas reflect a need for new systemwide tools and greater concern about how to help local leaders with implementation issues.

- Work with local policymakers to determine how to increase spending in priority areas and whether reallocation of existing resources is a viable option.
- Tie data on resources directly to specific educational programs, staffing configurations, and other improvement strategies so that cost-benefit and other analyses can be conducted.
- Ensure that districts have the data they need before the school year begins so that staff can use summer months to plan activities and budgets for the coming year.
- Give guidance to districts about prioritizing resources toward providing professional development, realigning staffing structures to accommodate the strengths and weaknesses of existing staff, and finding ways to recruit and retain quality staff.
- Pay special attention to the staff and system capacity needs in low-performing districts to ensure that a critical mass of educators, leaders, and community members gain the skills needed to succeed in using a more systematic approach.

School district level

Although the *improvement districts* did not bring in more money over time than their *comparison districts*, they did tend toward an approach that we term "needs-based budgeting." Needs-based budgeting focuses on school faculty, staff, and community identifying their highest priorities and making a case for resource allocation. Several examples from our interviews illustrate this strategy.

In one district, each school was asked to submit a budget to the district detailing the resources needed to carry out an improvement plan. If an important instructional expense could not be paid by categorical funds or outside grants, then district operating funds were used, but only if the expense could be justified as critical to the school's improvement plan. In another site, district and campus leaders drew from a mix of available fund sources to support the goals that emerged from a needs assessment. In a small district, teachers and principals reported they were encouraged individually to submit requests for resources to the district, with the message that if the need could be justified, the money would be found to fund them.

Our study underscores the fact that aligning resources to improvement goals is a way of doing business and

Aligning resources to improvement goals is a way of doing business, and not simply a reflection of expenditure line items or intentions stated in an improvement plan.

not simply a reflection of expenditure line items or intentions stated in an improvement plan. At the district level, several processes emerged as guides to local decision making:

- Recognize that one size does not fit all. In planning an approach to allocating resources, weigh heavily the specific circumstances of students and of each school in addition to the district as a whole.
- Seek and use input from parents, teachers, and administrators who have examined and discussed achievement data.
- Support school-level efforts to build parent and community support and develop districtwide programs that encourage the participation of these outside resources.
- Never cease communicating about the importance of allocating or reallocating resources from across the district in support of the goals.
- Spell out the district's accomplishments and strategies for meeting goals, establishing strong ties to the local business community, and partnering with local initiatives and agencies that serve the needs of children and families.
- Become familiar with state and federal funding regulations and make sure financial managers are skilled in their trade and have a deep understanding of district improvement goals and strategies so that they can give educators the greatest financial flexibility in meeting priorities.
- Develop the grant-writing skills of staff and critically assess the potential distraction and time cost of seeking grants before applying.

District leaders also acknowledged they lack the capacity to investigate, much less track over time, how their use of resources directly affects student performance.

Next steps

Looking ahead, we know that student achievement will need to improve dramatically if all students are to have access to good jobs and secure futures. With little or no new money, most states and districts must struggle with how more achievement can be produced with resources roughly at current or reduced levels. The challenge is to use current and future funds more effectively. To accomplish ambitious student achievement goals, we need a deeper understanding of how spending practices contribute to or impede reforms.

The relationship among fiscal resources and student success is very complex, and we do not yet have answers to many of the questions that states, districts, and schools ask about how to overcome financial challenges in implementing reform efforts. To shed light on the answers, researchers need opportunities to investigate spending patterns of successful and unsuccessful schools and districts. Investigators also need a clearer sense of the challenges and barriers states and districts face and the opportunities they encounter in making good use of resources.

The research we have reported here gives us a new understanding of district spending patterns, resource allocation practices, and allocation challenges in the Southwest. To follow up on these findings, we are already at work to further untangle the connections between resources and performance. We will look again at the all-important instructional expense categories to see whether more fine-grained patterns of allocating funds and staff lead to increased student performance. And we will investigate how the allocation of instructional resources may be different or need to be different for students, teachers, schools, and communities with varying characteristics. As part of our regional mission, we will use the results of this series of studies to create research-based knowledge to help raise student achievement in the Southwest.

Additional Information Resources

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Agencies and Organizations

Education finance statistics compiled by the U.S. Department of Education are posted at www.nces.ed.gov/edfin.

The *Digest of Education Statistics* contains information about revenues and expenditures at every level of education and is online at www.nces.ed.gov/pubs2001/digest.

The Consortium for Policy Research in Education posts findings from research on school finance and education reform at www.gse.upenn.edu/cpre/Research/Research.htm.

Information on evolving state policies in school finance is available online from the National Center on Education Finance at www.ncsl.org/programs/educ/NCEF.htm.

The Education Commission of the States frequently studies issues in education finance for state policymakers and posts information on its Web site at www.ecs.org/ecsmain.asp?page=/html/issues.asp?am=1.

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INSIGHTS AT A GLANCE

Research over the past decade has begun to show how differences in spending patterns affect school and district performance in terms of student achievement. Because performance expectations are growing—and growing more specific and stringent—it is more important than ever to push forward with resource allocation research and make sure the results are widely known. This edition of *Insights on Education Policy, Practice, and Research* summarizes a recent SEDL study that explores the links between how resources are spent and the resulting performance of students. In particular, this brief gives state and local policymakers a clearer picture of district spending and results in four states in the SEDL region.

National trends hold up in the SEDL region.

- Although Southwest districts spend less than national averages, the general spending patterns tend to be roughly similar to what other researchers have found nationally.
- On average, about 60% of education dollars are spent on instruction, including teachers, books, and instructional programs.

Beneath the averages, important distinctions can be seen.

- Southwestern districts with higher student performance allocated more fiscal and staffing resources to instruction than districts with lower student performance.
- In two of the four study states, more money was spent by districts with high student performance on core expenses (instruction plus student support and instructional staff support).
- Discussions with district staff reinforced the positive effects of investing in core expenses.

Staff and leadership in *improvement districts* view resource allocation as important to successful reform efforts.

- *Improvement districts* spent less on general administration and non-instructional services than *comparison districts*.
- Goals were more important than past spending practices.
- Staff, time, materials, parents, and community members were all included in how *improvement districts* defined "resources" reallocated to meet goals.

This brief concludes with suggestions to improve state and local procedures in favor of a more systematic approach to planning and resource allocation. Future SEDL research on this topic will include more explicit attention to contextual factors, such as student demographics and teacher characteristics, and will investigate more deeply into the links between instructional spending and performance in the region.

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